Template: Project Synopsis

<Title> <Acronym>

The full project title and short name/acronym will be generated by us, from the project contract.

<Logo> <URL to website>

File: ROBUST-Logo.png

http://robust-project.eu/

<Headline>

Understanding, Preserving and Predicting the Value of Online Communities

<Abstract>

Online communities generate major economic value and form pivotal parts of corporate expertise management, marketing, product support, CRM, product innovation and advertising. Communities can exceed millions of users and infrastructures must support hundreds of millions discussion threads that link together billions of posts. ROBUST is targeted at developing methods to understand and manage the business, social and economic objectives of the users, providers and hosts and to meet the challenges of scale and growth in large communities. The outcome of ROBUST finds its application in online communities in internet, extranet and intranet settings addressing customer support, knowledge sharing, and hosting services. In ROBUST the developed methods are evaluated in live industrial testbeds from of our partners SAP, IBM and Polecat to provide practical grounding and to assess project success. Results are integrated into software solutions and services of partners as well as an open source demonstrator to be released to the public.

<Project description> <Image>

ROBUST addresses five key topics of interest for understanding and managing business communities. The topics cover different facets of analyzing communities and capture their dynamics and evolution. Accordingly, the innovations of ROBUST fall into five categories:

- Risk management: communities represent an economic value to their owners. The communities and, thereby, their values are subject to various risks of different types. ROBUST will address two main challenges in this area: (a) identification and modeling of risks and (b) relating risks to the massive amounts of data generated in online communities. The identification of risks and opportunities in online communities will support the understanding and management of these communities. In particular it will enable stakeholders to identify threats, support their decision making process and lead them in choosing proactively measures to counter risks or seize opportunities.
- Community data management: the volume of data created in online communities in the form of texts, the interaction between users or simply the interaction of users with the system itself demands for new technologies for large scale data management and processing. Current approaches for managing community data show limitations in efficiency or scale. ROBUST will develop a new technical framework for streambased and distributed processing of data generated in online communities.
- Community polity and politics: understanding the behavior and needs of users at a micro level requires detailed user models. So far, models capture only certain

surface aspects of user behavior, like tagging or building networks. A deeper and more universal model of user needs and behavior will allow for classification of users based on measurable behavior patterns. These categories of users will be used to determine the role users play in a community, what is their status and what motivates their actions. This will lead to a simulation framework at the micro level of individuals in a community.

- Community policies: the policies installed in a community influence the activities and the dynamics of an entire community. It is, however, unclear how policies affect the development and evolution at a macro scale. Understanding the effects of policies on a community can help to forecast the way the community is evolving and in which direction it is heading. ROBUST will develop agent-based and mathematical simulation frameworks for entire communities.
- Community Analysis: the ability to detect sub-communities, find the topics they are dealing with and to recognize patterns in massive community data complements the other objectives. Existing data mining and analysis algorithms are static and do not take into account the evolution and the continuous changes. This will enable tracking the evolution of communities over time, rather at static snapshots.

ROBUST will integrate the components and methods developed in these five categories into a unified tool that allows to track, analyze and monitor entire communities on a high level (c.f. Figure 1). Visual representations like a risk dashboard or a metaphor-based community health indicator will enable community hosts to take care of their communities and preserve their value.

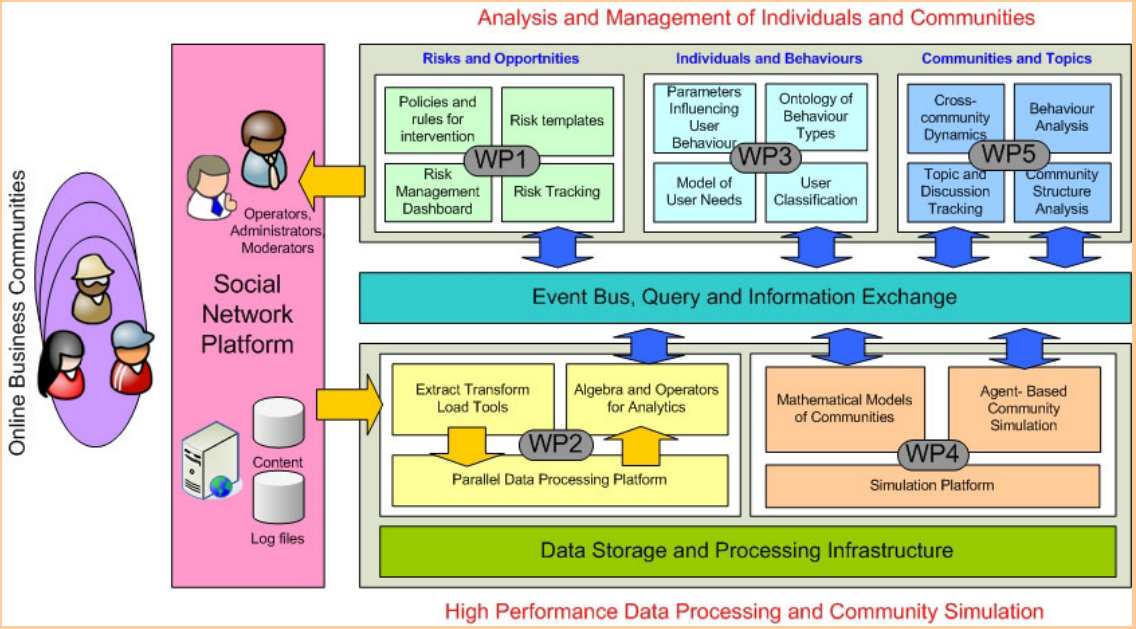

Figure 1 ROBUST high level architecture

<Technical details>

Within the first six month, ROBUST will develop a first prototype for a low level analysis of community generated content. Based on the Luxid platform of our partner TEMIS and public domain data provided by our partner MeaningMine the prototype will be an early demonstrator of an analysis component.

<More details>

Press release on project launch:
http://www.uni-koblenz-landau.de/koblenz/fb4/AGStaab/novel-research-project-for-managing-risks-and-opportunities-in-online-business-communities

General presentation:

<Administrative details> <List of participants> <Contact person>

The administrative details, list of participants, and contact persons will be generated by us, from the project contract.